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RIGHT HEMISPHERICITY AND LOW SELF-ESTEEM IN HIGH SCHOOL STUDENTS: A REPLICATION[1]

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Summary.—A total of 26 Grade 9 and 24 Grade 12 boys and girls were administered the Rosenberg self-esteem questionnaire and Vingiano's hemisphericity questionnaire. Greater right hemisphericity was associated with lower self-esteem. The strength of the effect ($r = 0.52$) was comparable to previous studies involving university students and supports the hypothesis that persistent input of negative affect from right hemispheric activation adversely influences the affective component of self-concept.

Self-esteem can be considered the major affective component of the complex cognitive processes that have been called the self-concept or sense of self. Persinger and Makarec (1) have hypothesized that ontogenetically persistent inputs from the right hemisphere (which subserves negative affect) should adversely influence the highly linguistic and left-hemispheric self-concept. Our original study and a recent unpublished replication ($n = 102$) with first-year psychology students have indicated a moderate association ($r = 0.50$) between the extent of right hemisphericity, as defined by Vingiano's (3) questionnaire, and low scores on self-esteem (Coopersmith).

This study was designed to assess the generalizability of relationship between hemisphericity and self-esteem: (1) with a nonuniversity population and (2) utilizing another psychometric source of inference, Rosenberg's scale about self-esteem. A total of 50 students (26 Grade 9; 24 Grade 12; equal numbers of boys and girls in each grade) were administered the Rosenberg (2) self-esteem scale (lower score reflects higher self-esteem) and Vingiano's Hemispheric Quotient. Analysis of variance as a function of sex and age indicated no statistically significant (all $F_{1,46}$s < 1.00, $p > 0.05$) group differences for the Hemispheric Quotient (grand mean and $SD = 0.55$ and 0.17). However, the older students displayed higher ($F_{1,46} = 6.31$, $p = 0.01$, *eta* = 0.33) self-esteem (17.6 and 4.6) than younger students (21.1 and 4.6), and boys (17.9 and 4.9) displayed higher self-esteem ($F = 4.03$, $p = 0.05$, *eta* = 0.26) than girls (20.8 and 4.8).

Pearson correlations between self-esteem and the Hemispheric Quotients indicated that right hemisphericity was associated with lower self-esteem for students in both Grade 9 ($r = 0.42$, $p < 0.03$) and Grade 12 ($r = 0.69$, $p < 0.001$). Partial correlation between self-esteem and hemisphericity for the entire population, after the variance associated with sex and grade had been removed ($df = 46$) gave a correlation of 0.54 ($p < 0.001$). These results replicate previous work and indicate that adolescents who display enhanced right hemisphericity may also display lower self-esteem. This negative affect could adversely influence their motivation within scholastic settings.

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